

What is claimed is:

1. A tracheal tube cover sized and dimensioned so as to be positioned around a tracheal tube wherein the tracheal tube comprises a machine end portion and a patient end portion, the tracheal tube cover comprising:

a sheath comprising at least one cuff having an expandable space in which fluid may be disposed, an outer surface of the at least one cuff being constructed of a material that allows fluid disposed in the expandable space to diffuse out of the tracheal tube cover at a desired rate; and

at least one injection assembly comprising an injection port and tubing, the tubing having a first end that is connected to the injection port and a second end that is connected to the at least one cuff, wherein at least a portion of the tubing is disposed adjacent to the tracheal tube such that the injection port is in close proximity to the machine end portion of the tracheal tube when the tracheal tube cover is secured about the tracheal tube.

2. The tracheal tube cover of claim 1 further comprising a bonding material for connecting the tracheal tube cover to the tracheal tube whereby the tracheal tube cover is secured about the tracheal tube.

3. The tracheal tube cover of claim 1 wherein the tracheal tube cover is provided with an upper cuff and a lower cuff.

4. The tracheal tube cover of claim 3 wherein the upper cuff is adapted to surround at least a portion of an intermediate portion of the tracheal tube below an air injection port of the machine end portion of the tracheal tube.

5. The tracheal tube cover of claim 3 wherein the lower cuff is adapted to surround a cuff of the tracheal tube.

6. The tracheal tube cover of claim 3 wherein the upper cuff is in fluid communication with the lower cuff, and one injection assembly is used to infuse both cuffs.

7. The tracheal tube cover of claim 3 wherein the upper cuff is connected to a first injection assembly and the lower cuff is connected to a second injection assembly.

8. The tracheal tube cover of claim 7 wherein the tubing of at least one of the first and second injection assemblies is labeled or colored to distinguish between the first injection assembly and the second injection assembly.

9. A method for topically anesthetizing tracheal surfaces of an intubated patient, comprising the steps of:

providing an assembly comprising:

a tracheal tube having a machine end portion and a patient end portion;

a tracheal tube cover disposed and sealed about the tracheal tube, the tracheal tube cover comprising:

a sheath comprising at least one cuff having an expandable space in which fluid may be disposed, an outer surface of the at least one cuff being constructed of a material that allows fluid disposed in the expandable space to diffuse out of the tracheal tube cover at a desired rate; and

at least one injection assembly comprising an injection port and tubing, the tubing having a first end that is connected to the injection port and a second end that is connected to the at least one cuff, wherein at least a portion of the tubing is disposed adjacent to the tracheal tube such that the injection port is in close proximity to the machine end portion of the tracheal

tube when the tracheal tube cover is secured about the tracheal tube;

disposing an effective amount of an anesthetic in the at least one cuff of the tracheal tube cover through the injection assembly of the tracheal tube cover;

inserting the assembly into a trachea of a patient; and

allowing the anesthetic to diffuse through the outer surface of the at least one cuff of the tracheal tube cover over time and thereby topically anesthetize the tracheal surfaces of the patient that are in contact with or in close proximity to the assembly.

10. The method of claim 9 wherein the step of providing an assembly further comprises connecting the tracheal tube cover to the tracheal tube via a bonding material whereby the tracheal tube cover is secured about the tracheal tube.

11. The method of claim 9 wherein, in the step of providing the assembly, the tracheal tube cover is provided with an upper cuff and a lower cuff.

12. The method of claim 11 wherein the upper cuff is adapted to surround at least a portion of an intermediate portion of the tracheal tube below an air injection port of the machine end portion of the tracheal tube.

13. The method of claim 11 wherein the lower cuff is adapted to surround a cuff of the tracheal tube.

14. The method of claim 11 wherein the upper cuff is in fluid communication with the lower cuff, and one injection assembly is used to infuse both cuffs.

15. The method of claim 11 wherein the upper cuff is connected to a first injection assembly and the lower cuff is connected to a second injection assembly.

16. The method of claim 15 wherein the tubing of at least one of the first and second injection assemblies is labeled or colored to distinguish between the first injection assembly and the second injection assembly feeding the second cuff.

17. A method for topically anesthetizing tracheal surfaces of an intubated patient, comprising the steps of:

providing an assembly comprising:

a tracheal tube having a machine end portion and a patient end portion;

a tracheal tube cover disposed and sealed about the tracheal tube, the tracheal tube cover comprising:

a sheath comprising at least one cuff having an expandable space in which fluid may be disposed, an outer surface of the at least one cuff being constructed of a material that allows fluid disposed in the expandable space to diffuse out of the tracheal tube cover at a desired rate; and

at least one injection assembly comprising an injection port and tubing, the tubing having a first end that is connected to the injection port and a second end that is connected to the at least one cuff, wherein at least a portion of the tubing is disposed adjacent to the tracheal tube such that the injection port is in close proximity to the machine end portion of the tracheal tube when the tracheal tube cover is secured about the tracheal tube;

inserting the assembly into a trachea of a patient;

disposing an effective amount of an anesthetic in the at least one cuff of the tracheal tube cover through the injection assembly of the tracheal tube cover; and

allowing the anesthetic to diffuse through the outer surface of the at least one cuff of the tracheal tube cover over time and thereby topically

anesthetize the tracheal surfaces of the patient that are in contact with or in close proximity to the assembly.

18. The method of claim 17 wherein the step of providing an assembly further comprises connecting the tracheal tube cover to the tracheal tube via a bonding material whereby the tracheal tube cover is secured about the tracheal tube.

19. The method of claim 17 wherein, in the step of providing the assembly, the tracheal tube cover is provided with an upper cuff and a lower cuff.

20. The method of claim 19 wherein the upper cuff is adapted to surround at least a portion of an intermediate portion of the tracheal tube below an air injection port of the machine end portion of the tracheal tube.

21. The method of claim 19 wherein the lower cuff is adapted to surround a cuff of the tracheal tube.

22. The method of claim 19 wherein the upper cuff is in fluid communication with the lower cuff, and one injection assembly is used to infuse both cuffs.

23. The method of claim 19 wherein the upper cuff is connected to a first injection assembly and the lower cuff is connected to a second injection assembly.

24. The method of claim 23 wherein the tubing of at least one of the first and second injection assemblies is labeled or colored to distinguish between the first injection assembly and the second injection assembly feeding the second cuff.

25. A tracheal tube assembly comprising:

- a tracheal tube having a machine end portion and a patient end portion;

- and

- a tracheal tube cover disposed and sealed about the tracheal tube, the

- tracheal tube cover comprising:

- a sheath comprising at least one cuff having an expandable space

- in which fluid may be disposed, an outer surface of the at

- least one cuff being constructed of a material that allows fluid

- disposed in the expandable space to diffuse out of the

- tracheal tube cover at a desired rate; and

- at least one injection assembly comprising an injection port and

- tubing, the tubing having a first end that is connected to the

- injection port and a second end that is connected to the at



least one cuff, wherein at least a portion of the tubing is disposed adjacent to the tracheal tube such that the injection port is in close proximity to the machine end portion of the tracheal tube when the tracheal tube cover is secured about the tracheal tube.

26. The tracheal tube assembly of claim 25 wherein the tracheal tube and the tracheal tube cover are integrally formed and permanently attached.

27. The tracheal tube assembly of claim 25 wherein the tracheal tube and tracheal tube cover are formed separately.

28. The tracheal tube assembly of claim 25 wherein the tracheal tube cover is provided with an upper cuff and a lower cuff.

29. The tracheal tube assembly of claim 28 wherein the upper cuff is adapted to surround at least a portion of an intermediate portion of the tracheal tube below an air injection port of the machine end portion of the tracheal tube.

30. The tracheal tube assembly of claim 28 wherein the lower cuff is adapted to surround a cuff of the tracheal tube.

31. The tracheal tube assembly of claim 28 wherein the upper cuff is in fluid communication with the lower cuff, and one injection assembly is used to infuse both cuffs.

32. The tracheal tube assembly of claim 28 wherein the upper cuff is connected to a first injection assembly and the lower cuff is connected to a second injection assembly.

33. The tracheal tube assembly of claim 32 wherein the tubing of at least one of the first and second injection assemblies is labeled or colored to distinguish between the first injection assembly and the second injection assembly.

34. A method for topically anesthetizing tracheal surfaces of an intubated patient, comprising the steps of:

- providing a tracheal tube having a machine end portion and a patient end portion;

- inserting the tracheal tube into a trachea of a patient;

- providing a tracheal tube cover comprising:

- a sheath comprising at least one cuff having an expandable space in which fluid may be disposed, an outer surface of the at least one cuff being constructed of a material that allows fluid

disposed in the expandable space to diffuse out of the tracheal tube cover at a desired rate; and

at least one injection assembly comprising an injection port and tubing, the tubing having a first end that is connected to the injection port and a second end that is connected to the at least one cuff, wherein at least a portion of the tubing is disposed adjacent to the tracheal tube such that the injection port is in close proximity to the machine end portion of the tracheal tube when the tracheal tube cover is secured about the tracheal tube;

disposing the tracheal tube cover about the tracheal tube inserted into the trachea of the patient;

disposing an effective amount of an anesthetic in the at least one cuff of the tracheal tube cover through the injection assembly of the tracheal tube cover; and

allowing the anesthetic to diffuse through the outer surface of the at least one cuff of the tracheal tube cover over time and thereby topically anesthetize the tracheal surfaces of the patient that are in contact with or in close proximity to the assembly.

35. The method of claim 34 wherein, in the step of providing the assembly, the tracheal tube cover is provided with an upper cuff and a lower cuff.

36. The method of claim 35 wherein the upper cuff is adapted to surround at least a portion of an intermediate portion of the tracheal tube below an air injection port of the machine end portion of the tracheal tube.

37. The method of claim 35 wherein the lower cuff is adapted to surround a cuff of the tracheal tube.

38. The method of claim 35 wherein the upper cuff is in fluid communication with the lower cuff, and one injection assembly is used to infuse both cuffs.

39. The method of claim 35 wherein the upper cuff is connected to a first injection assembly and the lower cuff is connected to a second injection assembly.

40. The method of claim 39 wherein the tubing of at least one of the first and second injection assemblies is labeled or colored to distinguish between the first injection assembly and the second injection assembly feeding the second cuff.